Human Brain Anatomy Software for Interactive Neuroanatomy Study

Technology #201192

Brain Anatomy Software with Images

The brain anatomy software package, NeuroTime®, helps students study neuroanatomy, learn the central nervous system structures and interpret brain MRI images (magnetic resonance imaging) in an interactive environment. The software includes high quality images of intact and dissected gross specimens of the central nervous system, whole brain sections and brain MRI images. Information is presented in three dimensions to assess the relationship between cross-sections of the specimens. The software has a brain anatomy Quiz Mode for knowledge testing. NeuroTime offers a convenient, mobile, electronic alternative to specimens that must be kept in liquid, reducing exposure of faculty and students to formalin, a mixture of formaldehyde, methanol, and water, saving their time and eliminating the cost of maintaining a specialized lab facility.

Visit the University of Minnesota Duluth Bookstore's website for purchase options.

Software Modes: Brain Anatomy Identification and Anatomy Quiz

The NeuroTime software has two primary modes, Anatomy Identification for learning and Anatomy Quiz for knowledge assessment. During Anatomy Identification, students study brain structures and their associated terminology by selecting the name of a structure from a list. This selection activates a colored overlay which identifies the name of the structure. During Anatomy Quiz, the software displays an image and asks for the identification of structures in the image. Users receive immediate feedback as they navigate to the areas they wish to study.

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Uses of Brain Anatomy Software

The software can be used in a neuroanatomy laboratory for medical students, and can also be adapted to meet the needs of students in other health science fields or in other stages of their careers. Users will gain an appreciation of the three-dimensional organization of the brain by studying photographs of whole and dissected human brains and brain sections, as well as MRI images of areas in the coronal, axial, and sagittal planes. Corresponding MRI images enable the user to apply this structural knowledge to the interpretation of MRI scans and other fields requiring anatomical knowledge.

Benefits of the NeuroTime Software for Neuroanatomy

The software is available on CD-ROM for Macintosh or Windows systems, enabling the students to study at any time and place they have access to a computer. Students find this to be a very efficient way to study neuroanatomy since they do not waste time looking for specimens in a lab, searching for the names of structures or waiting for an instructor's feedback. NeuroTime replaces brain anatomy models and wet specimens. With this software, medical schools can increase learning efficiency by eliminating the risks and costs of maintaining a specialized lab facility, and reduce exposure of both faculty and students to formalin. NeuroTime can be adapted for use in any curriculum that requires knowledge of neuroanatomical structures.

FEATURES OF THE NEUROTIME BRAIN AND NEUROANATOMY STUDY SOFTWARE

- Interactive tools and images
- Brain and neuroanatomy identification and quiz modes test users' knowledge
- Images from actual brain dissections
- Anatomical information about gross brain specimens, sectioned specimens, and MRI images
- MRI and cross-sections in three planes to view all angles of a specimen
- Colored structural indication overlays
- Available on CD-ROM for Macintosh and Windows

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